

WHAT IS CLAIMED IS:

1. A data transfer apparatus which is connected to another device via a communication path having a predetermined number of transfer channels, comprising:
 - 5 adjustment means for adjusting channel assignment to limit a sum of the number of channels required for new data transfer and the number of already assigned channels to a value not more than the predetermined number, when the sum exceeds the predetermined number
 - 10 upon executing data transfer between the devices; and assignment means for assigning channels, the number of which is adjusted by said adjustment means, to the device that transfers data.
2. The apparatus according to claim 1, wherein said adjustment means decreases the number of channels to limit the sum to a value not more than the predetermined number by reducing a data transfer rate of the device to which channels have already been assigned, when the sum of the number of channels required for new data transfer and the number of already assigned channels exceeds the predetermined number.
- 20 3. The apparatus according to claim 1, wherein said adjustment means decreases the number of channels to limit the sum to a value not more than the predetermined number by reducing a data transfer rate of new data transfer, when the sum of the number of channels

required for new data transfer and the number of already assigned channels exceeds the predetermined number.

4. The apparatus according to claim 1, wherein said adjustment means assigns empty channels to a device which requests new data transfer, and adjusts channel assignment when the number of assigned channels does not reach the number of channels required for data transfer.

5. The apparatus according to claim 1, wherein said adjustment means adjusts the number of channels assigned to the devices connected via the communication path.

6. The apparatus according to claim 1, wherein the plurality of devices include a computer and image scanning device.

7. The apparatus according to claim 1, wherein the plurality of devices include a computer and image forming device.

8. The apparatus according to claim 1, wherein the communication path is a one for transferring data in isochronous mode specified in IEEE1394.

20 9. A method of controlling a data transfer apparatus which is connected to other devices via a communication path having a predetermined number of transfer channels, comprising:

the adjustment step of adjusting channel assignment to limit a sum of the number of channels required for new data transfer and the number of already

assigned channels to a value not more than the predetermined number, when the sum exceeds the predetermined number upon executing data transfer between the devices; and

- 5 the assignment step of assigning channels, the number of which is adjusted by said adjustment means, to the device that transfers data.
- 10 10. The method according to claim 9, wherein the adjustment step includes the step of decreasing the number of channels to limit the sum to a value not more than the predetermined number by reducing a data transfer rate of the device to which channels have already been assigned, when the sum of the number of channels required for new data transfer and the number of already assigned channels exceeds the predetermined number.
- 15 11. The method according to claim 9, wherein the adjustment step includes the step of decreasing the number of channels to limit the sum to a value not more than the predetermined number by reducing a data transfer rate of new data transfer, when the sum of the number of channels required for new data transfer and the number of already assigned channels exceeds the predetermined number.
- 20 12. The method according to claim 9, wherein the adjustment step includes the step of assigning empty

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channels to a device which requests new data transfer, and adjusting channel assignment when the number of assigned channels does not reach the number of channels required for data transfer.

5 13. The method according to claim 9, wherein the adjustment step includes the step of adjusting the number of channels assigned to the devices connected via the communication path.

10 14. The method according to claim 9, wherein the plurality of devices include a computer and image scanning device.

15 15. The method according to claim 9, wherein the plurality of devices include a computer and image forming device.

15 16. The apparatus according to claim 9, wherein the communication path is a one for transferring data in isochronous mode specified in IEEE1394.

17. A storage medium that stores a program for making a computer, which is connected to other devices via a communication path having a predetermined number of transfer channels, function as:

adjustment means for adjusting channel assignment to limit a sum of the number of channels required for new data transfer and the number of already assigned channels to a value not more than the predetermined

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number, when the sum exceeds the predetermined number upon executing data transfer between the devices; and assignment means for assigning channels, the number of which is adjusted by said adjustment means, to 5 the device that transfers data.

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